UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,234	07/12/2004	Reiko Ueno	2004_1040A	3548

513   7590   11/18/2008

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ART UNIT	PAPER NUMBER
2446	

MAIL DATE	DELIVERY MODE
11/18/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.
10/501,234</td><td>Applicant(s)
UENO ET AL.</td></tr>
<tr><td>Examiner
ABDELNABI O. MUSA</td><td>Art Unit
2446</td></tr>
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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>29 August 2008</u>.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>43-59</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>43-59</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>18 September 2007</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Acknowledgment is made for the applicant's response and amendment filed on

08/29/2008.

Claim Rejections - 35 USC § 102

2.   The text of those sections of Title 35, U.S. Code not included in this action can

be found in a prior Office action.

Claim(s) 43-58 are rejected under 35 U.S.C. 102(b) as being anticipated by Kanekar et

al. Patent No (US. 6,751,191 B1)

As per **claim 43** Kanekar teaches a method of starting a first routing device

connecting a plurality of networks (FIG.2) to which a plurality of routing devices are

connected (FIG.8),

wherein each routing device (204) stores master router (202) data (208) for each

network (FIG.2) to which the routing device (R2) is connected and network identification

data (FIG.4) (routing device stores configuration file of master router Col.3, Line 15;

FIG.14B),

wherein the master router (R1) data stored by each routing device (R2) indicates

whether the respective routing device (FIG.6) is a master router (608) located on a path

to a parent router that assigns the network identification (408) data to identify the

networks (FIG.2) or a slave router (606) which is a routing device (R1) other than the

master router (R2) (the received signal indicates if the initialization is a master router of

a slave router Col.7, Line 20; FIG.8), and

wherein the network identification (1304) data of each respective routing device

(C1, C2) identifies a network (FIG.13) to which the respective routing device (C1) is

connected (1310) (the device identification information defines the network Col.3, line

57-65; FIG.14),

the method comprising:

requesting (122), by the first routing device (R2), the master router (R1) data

(FIG.13A) from each routing device (C1) connected to any of the networks (FIG.7) to

which the first routing device connects (host obtains data information from master router

to connect Col.8, line 65; FIG.9); and

disabling a router function (208) of the first routing device when a number of

detected master routers connected to any of the networks (FIG.2) to which the first

routing device connects is zero or two or more (the master router forwards packets until

fails then the slave router takes over Col.15-40; FIG.9), the number being based on

acquired master router data (FIG.13) received from the routers (C1,c2) in response to

the requesting (122) of the master router data (800) (FIG.8)

As per **claim 44** Kanekar teaches the method according to claim 43, wherein,

when receiving data (FIG.13) relating to a request for an attribute of a routing device

(R3), a routing device returns a response (1416), even if a hop count is zero and the

network identification data (FIG.13) of the source of the received data (H3) is different

from the network identification stored in the routing device (R3) which received the

request for the attribute (multiple hops and multiple router act on data functions

according to threshold Col.15, Line 53-65; FIG.14)

As per **claim 45** Kanekar teaches the method according to claim 43, wherein,

when a communication device (C1) connected to the networks (FIG.2) stores network

identification data (208) to identify a network to which the communication device

connects (each command line of FIG.4 identifies a particular router and a path to

connect to the network Col.7; Line 5-17; FIG.7), the method further comprises

transmitting requests for reading out network identification data (FIG.13) to

communication devices (FIG.8) connected to any of the networks (FIG.2) to which the

first routing device (R1) is connected, and disabling the router function (R2 stands by

when R1 functioning well) of the first routing device (R1) when a configuration (208) of

the networks (FIG.2) to which the first routing device is connected is different from a

configuration of networks stored by the first routing device (the master and the slave

routers may deliver different routing decisions Col.4, Line 1-17; FIG.3)

As per **claim 46** Kanekar teaches the method according to claim 43, further

comprising transmitting a request (1308) for reading out information (1310) relating to

the parent router (1309) to a routing device (R3) which stores master router (R1) data

(1410) indicating a master router (FIG.14).

As per **claim 47** Kanekar teaches the method according to claim 43, wherein only the master router requests writing of the network identification data to communication devices other than the routing devices (the master router forwards packets to devices until fails 1116; FIG.11), the master router accepts a request for writing the network identification data (FIG.13) only from the parent router (R2), and the parent router does not accept the request for writing the network identification data (the slave router functions only if the master router fails 1200; FIG.12)

As per **claim 54** Kanekar teaches a computer-readable recording medium having a program recorded thereon, the program causing a computer to execute the method of claim 43 (a computer program implemented in memory to run operations Col.16, Line 58; FIG.15)

Claims 48-53, and 55-58 are related to the same limitation set for hereinabove, where the difference used is interchanged the wording on the claims within the claim itself and was differently presented from the above treated claims. This change does **NOT** effect the **limitation** of the above treated claims. The citations from the prior art have been inserted as needed. Refer to the cited prior art for more details. Even though claim(s) 48-53, and 55-58 have been differently written from the above treated claims, yet the limitations did NOT change. As mentioned, claim 48 is the same as claim 43, claim 49 is the same as claim 46, claim 50 is the same as claim 49, claim 51 is the same as claim 47, claim 52 is the same as claim 51, claim 53 is the same as claim 52, ,

claim 53 is the same as claim 52, claim 55-58 is the same as claim 55, again there is no

difference in **limitations** between claims 48-53, and 55-58 and the above treated

claims, Refer to MPEP on claim format and presentations

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented
> and the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

Claim(s) 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Kanekar et al. Patent No (US. 6,751,191 B1) in view of Fukushima et al. Patent No. (US

6,049,524 A1).

As per **claim 59** Kanekar teaches The method according to claim 43,

wherein, when the first routing device receives master router data from each

routing device of the plurality of routing devices (FIG.8) , the first routing device detects,

based on the received (the master router forwards packets until fails then the slave

router takes over Col.15-40; FIG.9)

master router data (R1), a number of routing devices that transmitted the master

router data indicating that the respective routing device is a master router located on a

path to a parent router (the master router forwards packets until fails then the slave

router takes over Col.15-40; FIG.9) that assigns the network identification data (408) to

identify the networks or a slave router which is a routing device other than the master

router (the device identification information defines the network Col.3, line 57-65;

FIG.14), and

Kanekar fails to teach the method is performed when the first router is newly

connected to the network and when the first router replaces a previous router, wherein

the disabling of the router function of the first routing device prevents a loop path from

forming between the first routing device and the plurality of routing devices.

However, Fukushima teaches a router device for routing packets to destinations

on networks, and a system switchover technology in a router device having a redundant

configuration., A router that forwards packets between the terminals of different

networks and exchange routing information with another router to perform dynamic

routing of packets, when a newly-detected neighboring router (step 123) the module 14

notifies the protocol information manager module 15 of such router to be identified

(Col.3, line 48; Col.10, Line 16-54; FIG.8)

It would have been obvious to a person having ordinary skilled in the art at the

time the invention was made to have modified Kanekar by the teaching of Fukushima

identifying the router when first connected to a network or a router replaces a previous

router and providing a loop bath between router to effectively identify the newly

connected routers and implement load sharing scheme among multiple routers

operating a single device.

Response to Arguments

4.   Applicant's arguments with respect to the claim 59 have been considered but are
moot in view of the new ground(s) of rejection.

Response to Amendment

Applicant's arguments filed 08/29/2008 have been fully considered but they are
not persuasive. The amendment submitted by the applicant does not overcome the
rejection made by the examiner in the last office action. The applicant's argument has
been considered carefully and does not provide the evidence for lack of motivation.

The examiner interpreted the claims to its broadest reason interpretation and has
taken the language of the claims *As Written considering the invention as whole*, more
detailing from the specifications need to be inserted into the claims in regards to routing
device and startup method to clearly point out the nature of the claimed invention with
clear narrative language. Accordantly amendment to the claims with additional language
from the specification would place the application in better form and might overcome the
art cited.

The applicant recites that the references do not disclose, teach or suggest the
master router data is stored by each routing device and indicates whether the
respective routing device is a master router located on a path to a parent router that
assigns the network identification data to identify the networks or a slave router which
is a routing device other than the master router and disabling a router function of the
first routing device when a number of detected master routers connected to any of the

networks to which the first routing device connects is zero or two or more, the number

being based on acquired master router data received from the routers in response to

the requesting of the master router data"

In contrary, the cited art teaches a routing device and a load sharing in a network

through the use of a master router and a slave router operating in the same chassis

and having a shared set of interfaces. Prior to failure of the master router, the master

router communicates shared state information to the slave router. In addition, the

slave router operates in standby mode to obtain information from the shared set of

interfaces to reduce time when switching from the master router to the slave router

upon failure of the master router whereas, a default gateway is associated with both

the master router and the slave router and configured on the hosts such that a default

gateway IP address is associated with the shared IP address. The shared IP and MAC

addresses are associated with one of the routers (the first router or master router).

When the master fails, the slave takes over both the shared IP address and the shared

MAC address so that master router data is stored by each routing device and indicates

whether the respective routing device is a master router that assigns the network

identification data to identify a slave router. As shown in FIG. 14A, a master-slave

routing and switching system 1402 having a first router 1404 and a second router 1406

and a third router 1408 that is outside the routing and switching system 1402 is

coupled to the routing and switching system 1402 (Col.2, Line 12; Col.15, Line 66;

FIG.14A)

When the first router 1404 fails, the second router 1406 becomes the

default gateway for the first VLAN 1410 and therefore packets sent by the first

host 1414 are now redirected to the second router 1406, as shown in FIG. 14B by

line 1420. The second router 1406 will then route the packets to the third

router 1408 which will finally forward the packets to the destination. While both routers

are fully operational, only one functions as the master while the other functions as the

slave. The master therefore actively forwards packets while the slave functions in

standby mode. When the master fails, the slave takes over to forward any remaining

packets. the master sends a signal to the slave to assert that it is the master. For

instance, the first router to come up may assert such a signal. This is desirable since

the first router to come up will have a greater capacity for handling incoming and

outgoing packets. If both routers come up simultaneously, a priority previously

assigned to the routers may be used to determine which router will function as the

master so that a number of first routing devices connected to any of the networks is

based on the assigned master router data received from the routers in response to the

requesting of the master router data before failure (Col.8, Line 15; Col.16, Line 21;

FIG.14B)

The examiner interpreted the claims to its broadest reason interpretation and has

taken the language of the claims as written considering the invention as a whole.

Accordantly, the applicant should consider the prior art from the updated search made

of record and not relied upon.

Conclusion

5.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abdelnabi O. Musa whose telephone number is 571-2701901. The examiner can normally be reached on Monday Thru Friday: 7:30am to 5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on 571-2726798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. O. M./
Examiner, Art Unit 2446

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446